

Remarks / Arguments

Claims 40-52 are in the case. Claim 52 is amended herewith to correct an obvious error as recognized in the Office Action.

We turn now to the rejections.

Claims 40-51 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting over claims 1-12 of co-pending application no. 10/716,507. Reconsideration is requested. Claims 1-12 were canceled from 10/716,507 on filing by way of preliminary amendment.

Claim 52 is objected to for being in improper dependent form. Reconsideration is requested. Claim 52 has been amended to depend from claim 40. Claim 52 as amended limits claim 40 by defining form for the alloy of claim 40.

Claims 40-52 are rejected as being unpatentable under 35 U.S.C. 103 on the basis of an admission at page 4 of the application asserted to be that special grain boundaries are equal to or less than 29. The rejection takes the position that the recitation for sigma at said page 4, is a recitation of special grain boundary percentage of total grain boundaries. Reconsideration is requested. The figures recited for sigma define what a special grain boundary is and not the percentage of special grain boundaries. See paragraph 3 of the enclosed Declaration under 37 C.F.R. 1.132 of Drs. Aust and Tomantschger.

Claims 40-52 are rejected under 35 U.S.C. 103 as being unpatentable over Yasuda JP 06-267544. The position in the Office Action is that Yasuda requires recrystallization and requires cold rolling at 120°C or less and that cold rolling at 120°C would require heat treating at 120°C or more for recrystallization to be obtained and that heat treating at 120°C or more would result in Fsp content greater than 20%. Reconsideration is requested.

The Office Action states “it is well known cold working is done below recrystallization temperature.” It is submitted that the rejection is defective because it relies on what “is well known” rather than on concrete evidence. See In re Beasley, Fed. Cir. No. 04-1225, which holds that support for a rejection must be concrete evidence and not what the Office Action says is well known.

The rejection is defective secondly because the position in it is inconsistent with disclosures in Yasuda.

Inconsistencies as follow are presented if the position on which the rejection is based, is accepted.

(A) Yasuda requires a paste to be present during heat treating. This means that the heat treating has to be carried out at 66°C or less if Yasuda’s pasted grid is not to be destroyed, or else the requirement of paste presence has to be ignored. (See the response of October 18, 2004)

(B) Yasuda obtains “mechanical reinforcement” [0014] and increase in mechanical strength [0027]; however, if Yasuda obtains Fsp of at least 20%, ductility increases so mechanical reinforcement and increase in mechanical strength would not be obtained. As outlined in the declaration filed with the response on October 18, 2004 (page 2, #1a), the hardness of Yasuda’s only working example was found to increase from 12.2 to 19.7HV verifying the increased “mechanical reinforcement”. Yasuda’s only working example achieved a very low Fsp count ( $F_{sp} \ll 10\%$ ) which would be expected based on the increased hardness, contrary to the process of this application (see claim 44 and examples in the application).

(C) Yasuda, in its only working example, heat treats the pasted grid to recrystallize the grid at 60°C for 48 hours (in line with his statement that he achieves recrystallization at 60°C) which is below the 120°C maximum cold rolling temperature.

Thus, to obtain the claimed Fsp requirement, one has to change (omit) Yasuda's paste presence requirement during heat treating and not satisfy Yasuda's stated benefits of mechanical reinforcement and increased mechanical strength. It is submitted there is no motivation in Yasuda for omitting paste presence requirement and not obtaining mechanical strength/reinforcement, because Yasuda does not mention Fsp or indicate how to increase Fsp content or that at least 20% Fsp would provide a benefit. Yasuda, in its paragraph [0027] mentions corrosion resistance but seems to attribute obtaining this to addition of tin and calcium and nowhere attributes corrosion resistance to recrystallization. The only source of guidance provided by Yasuda is its working example which has been shown not to provide at least 20% Fsp, while enhancing the hardness from 12.2 to 19.7HV. (See the declaration filed with the response of October 18, 2004) It is submitted that the working example should be governing because of the inconsistencies noted on deviation therefrom. It is submitted that Yasuda is so confusing and non-informative that the rejection can only be based on improper hindsight. Moreover, the need to omit a requirement of Yasuda and not obtain a benefit Yasuda says he obtains, shows the interpretation of the rejection, of Yasuda permitting heat treating at 120°C, has to be wrong and based on improper hindsight.

The rejection at page 6 finds fault with the fact that Fsp of at least 40% (claim 42) and at least 50% (claim 43) were not obtained in the showing submitted for samples 3a and 2b in the declaration accompanying the response of October 18, 2004. It is submitted that this position is irrelevant and a red herring. The reason for the results in the declaration is that, for the experiments of the declaration, the conditions of Yasuda were tracked for comparison purposes so far as they were able to be understood, except for annealing. However, the Fsp content would be increased by deviating from the deformation process of Yasuda, as would be indicated from the instant application, for the alloy treated. See paragraph 4 of the accompanying declaration under 37 C.F.R. 1.132. Note also that

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greater than 40% Fsp and greater than 50% Fsp were obtained in a plethora of working examples in the application as filed.

It is submitted that the claims were presented as distinguishing Yasuda after careful thought and after consideration of the confusing Yasuda. The rejections not based on Yasuda, are clearly defective or are overcome.

This case has been pending for 4 ½ years and the invention is obviously of commercial importance.

Allowance is requested.

Respectfully submitted,

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